

Chloride Concentration in Water from the Floridan Aquifer System

Chloride concentration in water from the Floridan aquifer system has been monitored by the U.S. Geological Survey in Coastal Georgia since the 1950's. During 2004 67 wells completed in the Upper and Lower Floridan aquifers in the Brunswick, Glynn County area and 7 wells in Camden County were pumped and sampled. Water supply in the Brunswick area primarily is obtained from wells completed in the Upper Floridan aquifer. Intense pumping has reduced pressure in the aquifer and resulted in saltwater intrusion locally at Brunswick. Saltwater was first detected in the southernmost part of Brunswick during the late 1950's (Wait, 1965). Saltwater was migrating upward from deep saline zones through breaches in confining units as a result of reduced pressure in the aquifer. By the 1960's, a plume had migrated northward toward two major industrial pumping centers. Currently (2004), chloride concentration in water from the Upper Floridan aquifer is above State and Federal secondary drinking-water standards (Georgia Environmental protection Division, 1997; U.S. Environmental Protection Agency, 2000) in a 2-square-mile area in downtown Brunswick, and exceeds 2,250 milligrams per liter in part of the area (Leeth and others, 2004). More information on the Brunswick area monitoring can be accessed at URL: <http://ga2.er.usgs.gov/Brunswick>. In Camden County 7 wells were sampled during 2004 and currently chloride concentration in water from the Upper Floridan aquifer is below State and Federal secondary drinking-water standards (Georgia Environmental protection Division, 1997; U.S. Environmental Protection Agency, 2000).

References Cited

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